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parts and organs of the bird, with full explanations of the technical terms used in descriptive ornithology. This is followed by a "Key" or artificial analysis of the genera of North American birds, similar in plan to the artificial analytical tables employed in botanical manuals as a guide to the families of plants. The student being fitted to intelligently use the "Key," by a careful study of the "Introduction" which precedes it, the "Key" enables him without previous special acquaintance with the subject, to find the name of any species of bird occurring in North America, north of Mexico, he may chance to have. In the "Synopsis" which follows the "Key," and which forms the chief bulk of the volume, are given concise, admirably clear diagnoses of the species and varieties of our birds, with indications of their geographical range. The higher groups are also quite fully and satisfactorily characterized, including the exotic as well as the indigenous forms; and the classification adopted is probably the one most generally approved by leading ornithologists. The diagnoses are illustrated by upwards of two hundred figures of such parts as are most useful in classification. Following the general synopsis of the living forms, is a concise account of the fossil species, twenty-nine in number, which has the great merit not only of being the work of the highest authority on the subject, but of being the first and only general exposition of this department of American ornithology.

While, perhaps, not above criticism in respect to occasional minor details, it is a work not only especially designed for students and amateur ornithologists, but one well calculated to meet the end in view, and as such entitles the author to the gratitude of all beginners and even somewhat advanced students of American ornithology.—J. A. A.

BOTANY.

A Blue Anagallis.—Dr. Gray recognizes the fact that *Anagallis arvensis* L., occurs sometimes not only with purple and even white flowers, but also with blue ones. Of course it is well known to restrict itself, usually, to a rather peculiar red. I have this season found near my house a vigorous plant bearing flowers of most beautiful and decided blue, which is the first instance within my observation. I would like to know how common this form is, and whether it is not a singular characteristic that one species should thus exhibit two of the primary colors, as I remember no other such case except in shrubs induced by cultivation. I am unable to detect in the plant before me any difference from the common form, unless, perhaps, less pointed petals and somewhat narrower leaves.— C. M. TRACY, *Lynn*, *Mass.*

EPIGÆA REPENS.—This plant deserves a more careful examination than it has yet received. The infrequency of the occurrence of fruit has been explained in different ways, but no satisfactory explanation has yet been offered. In the "Botanical Register," vol. 3, p. 201, the following statement occurs:—"Some of the corollas are frequently found to be sterile; and, according to Michaux, it would appear that the species was diœcious, the flowers being sometimes barren throughout in individual plants." Mr. Meehan has called attention to the great degree of variation which occurs in many of our native wild plants, this among the number, and it is to be earnestly hoped that our botanists will commence early to make more critical observations respecting variations in such cases. A series of carefully conducted experiments in regard to the cross fertilization of Epigæa is much needed. Owing to the great facility with which such experiments can be performed, we are confident that some of our readers will take the matter in hand.

DIMORPHIC FLOWERS OF THE IPECAC PLANT.—Prof. Balfour of Edinburgh has given to the Royal Society of Edinburgh, a very interesting account of dimorphism in the flowers of *Cephaëlis Ipecacuanha*. The plants in the Edinburgh Botanical Garden were derived from two sources; in one case the flowers have long stamens and short styles. In the other case there is distinct dimorphism. Some of the flowers have long stamens and a short style; others short stamens and a long style. Successful fertilization has followed the application of the pollen from one form to the stigmas of the other form. It will be remembered that this plant belongs to the order *Rubiaceæ*. This order gives us one of the very best common instances of dimorphism, *Houstonia cœrulea*, clearly described in Dr. Gray's "How Plants Behave."

IODINE IN THE DETERMINATION OF FUNGI.— Some of our readers are acquainted with the use of chemical re-agents made by Nylander in the study of lichens. This application has led to the idea that a similar use of chemical tests may be adopted in the determination of fungi. In the Feb. (1873) number of the "Journal of Botany," Mr. Phillips gives some facts respecting the employment of tincture of iodine for this purpose. The re-agent used is the common tincture of iodine, diluted to one-half with alcohol.

A drop of this is placed on a glass slide with a thin section of the hymenium and subjected to a slight pressure, under a magnifying power of 300–400 diameters. The blue-purple or purple-black color which appears in the investigation of some *Pezizas*, appears to be specifically characteristic. Thus *Peziza melaloma* A. S., no reaction. *P. badia* P., summits of asci pale blue. *P. repanda* Wahl., apices of asci blue. *P. trechispora* B. and Br., tips of paraphyses deep purple-blue. *P. vitellina* Pers., tips of paraphyses deep purple-black.

It may be worthy of note that owing to the blue color obtained in 1858, by Mr. F. Curry, in the examination of a species of *Tuber*, the name *Amylocarpus* was given as a generic appellation.

A NEW FLY-TRAP.—Professor A. Braun, in a communication to a Botanical Society, has briefly described a new form of vegetable fly-trap. (Botan. Zeitung, Sept. 20, 1872). The plant referred to is an East Indian Papilionacea, *Desmodium triquetrum* DC.

The simple leaf with a margined petiole feels rough to the touch, and remains hanging lightly to the finger which has touched it. Little flies, which alight on the leaf, are held by an invisible power and die after ineffectual struggles to free themselves from it. One can often see six or eight flies fastened in this way to the upper surface of the blade; less often, and more widely scattered, on the underside. The hairs which act thus are distributed over the whole surface and appear to the naked eye as scarcely noticeable white points: they are not over 0·08–0·10 millimetres long, and 0·01 millimetres thick, and consist of two cells. The under cell is one-fourth of the whole length. The upper cell is pointed like a fish-hook with a sharp barb. These acute angles, invisible without a lens, are what fasten the insect down.

Beside the angled hairs there are others on the leaf. They are found especially on the nerves, and have a much more appreciable length and thickness (0·50 and 0·01 millimetres), they are unicellular, blunt, and on the upper surface beset with little projections.

ZOOLOGY.

A FOUR-LEGGED ROCK LARK.—On November 23rd, while walking on the seashore in the vicinity of Plymouth, I saw the most